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Integral equations with logarithmic singularities in kernels of two-dimensional problems for anisotropic bodies with defects

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Abstract

Two-dimensional problems of elastostatics for anisotropic bodies with defects along a smooth open arc are considered. Complex potentials are constructed for a plane and a circle with defects. Several methods for constructing complex potentials are proposed for a plane and the Muskhelishvili conjugation method is used for a circle. Integral equations with logarithmic singularities in kernels of boundary value problems are derived for a plane and a circle with defects.